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Educational opportunities and curricular programs offered by 2 school systems serving multicultural communities in New Mexico were examined. Differential pupil performance between Indian, Spanish American and Anglo students was studied by comparing ability test scores, achievement test scores, attendance records, drop out rates and post high school plans. These comparisons were made at the elementary, junior high, and senior high school levels. Findings indicated that the programs offered by the 2 school systems appeared to be ill-suited for Spanish American and Indian students since even those minority children who began school with a comparable level of ability failed to gain as much from their schooling as their Anglo peers. Moreover, a comparison of attendance, drop out rates and post high school plans among the 3 ethnic groups revealed a cumulative loss of faith in the school and its program among students from the 2 minority groups. (EV)

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EQUALITY OF EDUCATIONAL OPPORTUNITY FOR SPANISH-AMERICAN AND INDIAN STUDENTS IN TWO MULTI-CULTURAL COMMUNITIES: AN EXPLORATORY ASSESSMENT[1]

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EQUALITY OF EDUCATIONAL OPPORTUNITY

FOR SPANISH-AMERICAN AND INDIAN STUDENTS

IN TWO MULTI-CULTURAL COMMUNITIES:

AN EXPLORATORY ASSESSMENT

ABSTRACT

Early attempts to assess equality of educational opportunity for minority groups have consisted largely of enumerating facilities and programs and determining the ratio of students to teachers and various school facilities. The recent survey of equality of educational opportunity by the United States Office of Education, however, redefined this concept in terms of the differential results of the schools' programs for children from various ethnic and racial groups.

This paper contains an exploratory assessment of the educational opportunity offered by school systems serving two multicultural communities in New Mexico. In order to appraise the educational opportunity existing for Indian, Spanish-American, and Anglo students, several measures of pupil performance were examined and the three ethnic groups were compared at the elementary (grades 1-6), junior high (grades 7-8), and senior high (grades 9-12) school levels. Differential pupil performance was examined by comparing ability test scores, achievement test scores, attendance records, turn-over between 1960 and 1966, and post high school plans in one graduating class.

The findings indicate that the programs offered by the two school systems studied appear to be particularly ill-suited for Spanish-American and Indian students, since even those minority children who begin school with a comparable level of ability fail to gain as much from their schooling as their Anglo peers. Moreover, a comparison of attendance, drop-out rates, and post high school plans among the three ethnic groups reveals a cumulative loss of faith in the school and its

programs among Spanish-American and Indian children. The authors conclude that it is the performance of Spansih-American and Indian students that is most affected by inadequate educational programs offered by the two school districts investigated.

EQUALITY OF EDUCATIONAL OPPORTUNITY: ITS DEFINITION AND ASSESSMENT

Of the many responsibilities ascribed to school systems, the teaching of intellectual skills and knowledge is among the most important. The significance of this responsibility is documented by the continuous changes in the pedagogical enterprise. Systematic upgrading of staff qualifications, programs stimulated by a sparte of legislative acts ear-marked to alleviate specific problems, and the emphasis on technological innovations are a few of the measures designed to enhance the acievement of cognitive skills.

Not the least of the recent concerns is that of equality of educational opportunity. The focus of attention here, of course, is equal education for all members of the American populance. In part, this concern is manifested in the endeavors to offer equal education for members of minority cultural groups. Coupled with the concern to provide equal educational opportunities is the responsibility of assessing the effectiveness of such efforts. Anyone who attempts to assess educational opportunity is plagued with an assortment of problems, of which, the selection of criteria is perhaps the most difficult. It seems apparent that fulfilling the responsibility of teaching intellectual skills and knowledge and the subsequent assessment of effectiveness in meeting this responsibility is particularly difficult in a school system that draws its pupil population from rather divergent cultural backgrounds.

What is more there appears to be lack of agreement as to the meaning of the concept "equality of educational opportunity." Coleman (1968) traces the evolution of the meaning of this concept from the time of preindustrial Europe to the present. He points out that in the United States the concept of educational opportunity has assumed a passive role for the

school and the community. The community's obligation was discharged by providing free public education up to a certain level with a common curriculum for all children regardless of their background, in the same school, within a given locale. At a somewhat later date this concept was modified slightly to include diversified curricula, first at the secondary level, more recently at the elementary level. This approach attempted to match the child's curriculum with his expected future occupation.

The active role devolved upon the child and his family, in that the child himself was responsible for his own achievement. The burden of failure for children from cultural minority groups or from impoverished homes could be shifted from the school to the child and his family. Failure then was imputed to be due either to lack of parental interest in the child's attaining an education or to ethnic inferiority in mental ability. (see Anderson and Safar, 1967). This concept of equality of educational opportunity has been implicit in public education throughout most of the nineteenth and twentieth centuries.

Attempts in the past to assess equality of educational opportunity among schools and school districts have consisted chiefly of comparing characteristics of the school buildings such as age, size, and condition; counting courses in the curriculum and volumes in the school library; and calculating the ratio of students to teachers, drinking fountains, rest rooms, etc. (see Dyer, 1968; Ashmore, 1954).

The recent survey of equality of educational opportunity (Coleman et al., 1966) by the United States Office of Education under provision of the Civil Rights Act of 1964 embodied a new definition of educational opportunity. For purposes of this study, inequality of educational

opportunity was defined in terms of the differential results of the schools programs for children from different ethnic and racial backgrounds. According to this definition, inequality of education exists when children from minority groups fail to achieve at the same level as their majority peers. Here emphasis is placed on assessing the results of schooling rather than simply enumerating facilites and programs as had been the case hithertofore.

The balance of this paper contains an exploratory assessment of the educational opportunity offered by school systems serving two multicultural communities in New Mexico. The differential effects of the schools on the performance of Anglo, Spanish-American, and Indian students will be examined in order to appraise the degree of equality of educational opportunity existing in each community.

SURVEY DESIGN

This assessment was undertaken as part of an Equal Educational Opportunities Institute conducted at New Mexico State University during the summer of 1966 under a grant from the Office of Education. Following five weeks of discussions, seminars and lectures concerning the historical and current status of minority group relations in the Southwest a field laboratory experience was conducted in the form of a comprehensive community study. One of the major goals of this field experience was to afford the students an opportunity to assess the extent to which equal educational opportunities were provided for Indian and Spanish-American children.

This assessment was conducted in two New Mexico school systems. The community served by school system A is characterized as a rural farming community predominantly Anglo in makeup. Spanish-speaking families and a

few Indian families, primarly Navajo, constitute minority groups. The bulk of the Navajo Indian pupils who attended the public schools reside in a dormitory in the community. The school board, school administration, and all but a very few teachers are Anglo. This community has a population of approximately 6,000 of which 85 percent are Anglo, 13 percent are Spanish-American, and 2 percent are Indian. The community operates three elementary schools, one Junior and one senior high school employing 89 teachers all told.

Many of the Anglos and Spanish-Americans residing in the community served by school system B are employed by the federal government at one of several military installations. The school population in this system consists of 30 percent Anglo students, 55 percent Spanish-American students and 15 percent Indian students. The Indians are bussed in from the Mescalero Apache reservation each day. At the time that this survey was undertaken the school board consisted of four Spanish-American and one Anglo member. The superintendent was Spanish-American, but the other administrators and the majority of the 63 teachers were Anglo. School system B comprises two elementary schools, one of which is located on the Indian reservation, one junior high school, and one senior high school, both of which are located off the reservation.

In order to assess the differential effectiveness of the schools' programs for Indian, Spanish-American and Anglo students, several measures of pupil performance were examined and the three groups compared at the elementary (grades 1-6), junior high (grades 7-8) and senior high (grades 9-12) school levels. Differential pupil performance was examined by comparing ability test scores, achievement test scores, attendance records, and turnover between 1960 and 1966 in the graduating class of 1966. These data were

obtained by drawing a systematic sample from the cumulative student records in each of the school systems studied. Every third record was included in the sample.

Most students in the two school districts had completed the California Test of Mental Maturity. However, due to changes in the testing program over the years and transfer students from school districts with different testing programs whose test scores were transferred with them, IQ scores from the Otis, Stanford-Binet, and School and College Ability Tests (SCAT) were also encountered. The same problem was encountered in analyzing achievement data since a variety of achievement tests had been administered to students in the two districts, namely, the Iowa Test of Educational Development, the Stanford Achievement Test, and the Metropolitan Achievement Test.

Arriving at an overall measure of achievement for the Iowa Test of Educational Development posed no problem since a composite score normally is obtained from the subtests and was recorded for each child who had completed this test. Composite achievement scores, however, were not part of the Stanford Achievement Test battery or the Metropolitan Achievement Test battery. For both of these tests, subtest scores were first converted to stanines (the Metropolitan Achievement Tests were already reported in stanines) and a composite achivement score was obtained for each student on the test battery by averaging the converted subtest scores. Figure 1 describes the final conversion of ability and achievemen test scores to a common scale related to the normal distribution.

Figure 1

PUPIL PERFORMANCE-THE FINDINGS

DIFFERENTIAL MENTAL ABILITY

Probably the first pupil characteristic which receives consideration in an attempt to investigate expected learning is ability level. Figure 2 provides data relative to ability levels of Anglo. Spanish-American and Indian pupils for the two school systems.

Figure 2

On the basis of national norms, 40 percent of the pupils should fall in the high group, 20 percent in the middle group and 40 percent in the low group. These expectations are based on the assumption that the students who were included in the sample are representative of a pupil population wherein pupil abilities are normally distributed. Examination of the percentages of Anglo, Spanish-American and Indian pupils within the respective ability groups reveals a marked divergence from the 40-20-40 expectancy.

In system A, 55 percent of the Anglo pupils have high IQ scores at the 60th percentile or above. A slightly higher percentage of students fell into this category than had been predicted from the distribution of scores among the national reference group. It is rather interesting to note that the distribution of IQ scores among the sample of Spanish-American students most closely resembles that of the norm group. However, slightly more of the student's scores fell between the 40th and the 59th percentile than had been predicted. Although the nonsignificant value of chi square indicates that this slight departure from the 40-20-40 percent expectation can be attributed to random variation in the sample of Spanish-American students that was drawn. The greatest departure from the expected distribution of

ability scores, however, is found among the Navajo students. Fully 73 percent of thesechildren have IQ scores below the 40th percentile. At the same time only 18 percent have high IQ scores.

When we examine the distributions of ability scores in school system B, the same pattern is evident, only the disparities among the three groups are even greater as evidenced by the large significant chi square values.

Thirty percent more of the Anglo students in this district attain higher IQ scores than predicted from the distribution of scores among the national norm group. Fully 70 percent of these children score above the 59th percentile on standardized tests of ability. Even when compared to Anglo children in community A these IQ scores are high. However, this finding is not unexpected if one compares the two communities. Community A is largely a farming community in Northern New Mexico. In contrast many Anglo families residing in Community B have only recently moved to Southern New Mexico to work at one of the government installations nearby. Because of the relatively high educational and occupational levels of these families, children would be expected to score higher on ability tests.

At the same time only 21 percent of the Spanish-American children, and 11 percent of the Mescalero Apache Indian children have comparable scores above the 59th percentile. Among the Indian students 73 percent of the Apache children have IQ below the 40th percentile.

Earlier studies have demonstrated the same pattern of differential ability. Anastasia (1958) cities studies that show that American Indian children do as well as white children on performance tests but do not perform as well on language tests. However, on the Goodenough Draw-A-Man test their scores have been found to be significantly higher than their white classmates. (Dennis, 1942; Havighurst et al., 1946; Russell, 1943).

An early study of Mexican-Americans demonstrated that in comparison with white children, these children achieve low scores on verbal intelligence tests while at the same time out performing their white peers on performance tests (Garth et al., 1936).

More recently the Coleman (1966) study of Equality of Educational Opportunity demonstrated that both at the first grade level as well as at the twelfth grade level, Mexican-American children's verbal and nonverbal ability scores are far below those of the white majority. What is more this study found the median scores for a national sample of Indian children to be slightly above those of the Mexican-American children included in the sample on both measures of ability; however, these scores were again far below those of their white peers.

An issue which has received considerable attention is the appropriateness of using tests to measure general ability or scholastic aptitude for pupils with backgrounds that differ from the dominant Anglo middle class culture. As an outgrowth of attempts to tap the genotype of intelligence a changed conception of intelligence has emerged (see Hunt, 1961). Assuredly, intelligence tests are not culture free. They measure a sample of general learnings based on experiences which offer reasonable estimates of future learning in school. Intelligence scores, then, can be thought of as indicating the extent to which children have been able to learn from the cultural milieu that surrounds them. Items on these tests are largely quantitative and verbal in nature--skills which are basic to progress in educational programs. Consequently, they are quite valuable in predicting how well a child will perform on school achievement tests which attempt to measure the outcomes of deliberate instruction.

Tyler (1955, p. 303) summarized the research on this topic by concluding:

> It can be said with considerable certainty that Indian averages are considerably below white averages on tests involving a high degree of abstraction and the understanding of verbal concepts. In tests involving reasoning in terms of concrete materials and manipulation of spatial relationships, there is some evidence that the two races do not differ. In making use of these findings, we should remember that it is the abstract, verbal test materials that afford us our best prediction of school success, so that we should expect Indians as a group to be less well adapted than whites to the kind of school work customary in our civilization.

Although Tyler's remarks pertain to performance of Indian pupils, the summary is relevant for pupils from other minority groups. Rather than rejecting these tests because of cultural factors, differential performance on such tests by various cultural and ethnic groups should be taken into account in predicting student success in school or in assessing the differential effectiveness of school programs for members of minority groups. For example Payne (1964) has demonstrated that by the end of the first grade more than 50 percent of the students who will be experiencing acute difficulty with arithmetic in grade six can be identified. By the end of the second grade two-thirds of these failing students can be identified on the basis of IQ test scores, arithmetic achievement test scores, and elementary knowledge of the child's socioeconomic background. Such prediction provides the school with a means of identifying early in their school career students for whom the usual curriculum is inappropriate, thus providing several years of lead time in which the school can attempt to prevent such failure. Deutsch et al. (1964) provide an excellent discussion of the factors that should be taken into account in testing minority group children.

SCHOOL ACHIEVEMENT

Figure 3 provides information concerning the acievement of pupils from the various ethnic groups for the two respective school systems.

Figure 3

In view of the ability data, one would expect the chi square values calculated to determine how these distributions of achievement scores compare to the distribution of scores for the norm group to indicate significant departures from the expected distribution. For example, in System A, the Anglo pupils had the following distribution of ability test scores: high (55 percent), medium (18 percent), and low (27 percent). Basing achievement expectancies on these values, instead of those for the national norm group, it is found that actual achievement values bear a close resemblance for the Anglo pupils. A similar correspondence between actual and predicted distributions of achievement scores was found for Spanish-American and Indian pupils. However, for all pupils, slightly lower percentages are found in the medium and high achievement groups than would be expected on the basis of ability data.

In System B, the percentage of pupils with high, medium, and low achievement scores is much lower than one would expect even on the basis of the ability data in Figure 2. For all three ethnic groups, there is a higher percentage in the low achievement group and a lower percentage in the middle and high achievement groups than would be expected on the basis of the distribution of ability scores.

It is not surprising to find a substantial relationship between ability and achievement; both are a measure of learning, the former more general than

the latter. It is somewhat surprising to find the disparity between ability and achievement in Community B that obtains for all three ethnic groups.

The above analysis treated the two variables independently; however, in Figure 4, the relationship between ability and achievement can be observed. These data reveal a moderate relationship between ability and achievement as evidenced by the magnitude of the gamma values calculated as measures of association. The strength of this relationship appears to increase among low ability students and decline among medium and high ability students as we consider Anglo pupils, Spanish-American pupils and Indian pupils in turn. For all three ethnic groups, students in the medium ability category (i.e., 40th to 59th percentile) appear to achieve at a lower level than expected.

Figure 4

Among the Anglo children in System A low and medium ability students (i.e., students with scores below the 60th percentile) on the whole score higher on achievement tests than expected. In contrast Spanish-American and Navajo students with comparable IQ scores score much lower on achievement tests. Similarly high ability Spanish-American and Indian students do not score as high on achievement tests as do high ability Anglo students. While 69 percent of the Anglo children's achievement scores are above the 59th percentile, only 42 percent and 29 percent of the high ability Spanish-American and Indian children, respectively, have high achievement scores.

Again, in System B Spanish-American and Apache children at all three ability levels score much lower on achievement tests than do their Anglo peers with comparable IQ scores. Among the Indians this disparity is most evident. Sixty-nine percent of the Apache students with IQ scores in the

40th to the 59th percentile have achievement scores below the 40th percentile and all of the achievement scores of the high ability Indian students fall in this low range.

Although the sample sizes are rather small, it is interesting to observe the difference in the relationship between ability and achievement for Indians in the two systems. Of the Indian pupils in the high ability group in System A, 71 percent have medium or high achievement scores, whereas, in System B, all of the Indian pupils in the high ability group mainfest low achievement scores. Moreover the two measures of association indicate a greater correspondence between ability and achievement in school system A than in B.

In general this analysis demonstrates unequivocally that lack of achievement on the part of Spanish-American and Indian children who attend public schools in these two communities cannot be solely attributed to lack of ability.

In order to obtain an insight into the performance of pupils as they move through the educational system an analysis of the relationship between ability and achievement was made for all pupils according to educational level--elementary, junior high, and senior high school. Figure 5 portrays this relationship.

Figure 5

Within System A the relationship between ability and achievement scores on standardized tests is not nearly as strong as one might suspect. At the elementary level a larger proportion of students with IQ scores below the 60th percentile perform at a higher level on achievement tests. In the

junior high schools, however, students in general, regardless of ability, perform at a much lower level on achievement tests. Even among the high ability students almost half of these students score below the 60th percentile on achievement tests.

Low and medium ability high school students appear to perform somewhat better than expected with 24 percent and 28 percent, respectively of these students performing at the 60th percentile or above. At the same time 44 percent of the high school students with high IQ scores perform poorly on achievement tests (i.e., below the 60th percentile).

School District B presents a similar picture. However, the relationship between ability and achievement is much stronger at the elementary level and decreases as we move to the secondary levels. Fully 90 percent of the low ability students score below the 40th percentile on achievement tests. On the other hand, 66 percent of the high ability students have comparably high achievement test scores.

Again students apparently experience difficulty by the time they reach junior high school. Students with IQ scores above the 39th percentile on the whole, score quite low on achievement tests. Figure 5 shows 71 percent of the medium ability junior high students and 42 percent of the high ability students with achievement test scores below the 40th percentile. The picture is much the same for high school students in System B. Again a surprisingly large percentage of students with IQ scores at the 40th percentile or above do poorly on achievement tests.

It is quite evident from the data that the relationship between ability and achievement is more substantial at the elementary and senior high school levels than at the junior high school level. There appears to be a "breakdown" in this relationship among junior high school students. This is quite

evident in System B, where none of the pupils in the low and medium ability groups are in the high achievement group. Moreover, 42 percent of the high ability junior high students score below the 40th percentile on achievement tests.

SCHOOL ATTENDANCE

As further evidence of pupil performance, data concerning pupil attendance were obtained. The authors view attendance as a reflection of the pupil's perception of and attitude toward the school system. Viewed in this manner, attendance is another measure of pupil performance. Figure 6 contains a summary of pupil attendance by educational level for the three ethnic groups.

Figure 6

A rather consistent pattern of attendance is found for Anglo and Spanish-American pupils at each of the educational levels in System A. In fact there is a slight improvement in attendance at the secondary level. On the whole the majority of these students attend school regularly.

In System B the same consistency in attendance obtains in general for Anglo children. However, there is a slight decline in attendance at the upper grade levels. Among the Spanish-American students in this school system the most notable decline in attendance occurs at the high school level. Fully 41 percent of these students were absent from school more than 10 days during the last academic year. In contrast only 31 percent of the Spanish-American junior high school students and 28 percent of the elementary school children missed as much school during the same period of time.

The pattern of attendance for Navajo pupils in System A is consistent, reflecting the influence of the dormitory in which they reside in that

community. However, in System B, where Indian students commute to school, the attendance of Indian pupils at the junior and senior high school levels is less than satisfactory. For those Apache children who remain in schools in this district, attendance becomes progressively worse. While 43 percent of the Indian elementary school children missed more than 10 days of school during the past year, 70 percent of the Indian junior high school students and 91 percent of the Indian senior high school students were absent from school a comparably amount of time.

The poor attendance of Apache children is even more significant when it is noted that the elementary school which these children attend is located on the reservation and is largely attended by Indian children along with a few children whose parents work for the Council of Tribal Chiefs or the Bureau of Indian Affairs. The attendance of these children is much poorer than the attendance of Anglo and Spanish-American children who attend the elementary school located off the reservation. One would surmise that the transportation to a junior high school located off the reservation, in which the Indian children constitute a minority, is difficult for many Apache children. Figure 6 indicates that 55 percent of the Indian children who attended this junior high school during the 1965-1966 school year were absent from school 20 or more days. This represents by far the poorest attendance of any age group within any ethnic group included in the study.

It is quite possible that the poor attendance in this situation is related to the relatively low achievement of these pupils as reflected in Figures 3 and 4. While a casual relationship is not implied it is logically assumed that attendance, at least in part, is necessary if a student is to achieve academically.

TURNOVER IN THE GRADUATING CLASS OF 1966: SCHOOL SYSTEM B

In order to supplement these ability, achievement, and attendance data, an analysis of turnover in the graduating class of 1966 was performed in System B. The school records of each member of this class were traced back as far as possible to determine the point in time at which each child first entered a school in district B. Adequate records were not available before 1960; consequently, it was impossible to determine which of these children attended school together at the elementary level or even if they attended a school in this district.

Figure 7 summarizes the history of the class of 1966. At the end of the seventh grade the class consisted of 139 students. Forty-one were Anglo; 73 were Spanish-American; and 25 were Apache Indians. During the 1961-1962 school year while these children attended the eighth grade of the junior high school, seven Anglo, four Spanish-American; and four Indian children transferred into the class. At the same time six Anglo, six Spanish-American, and one Indian child left the class before the end of the school year. As a result, the composition of the class changed slightly at the beginning of the ninth grade as shown in Figure 7.

Figure 7

Among the Anglo members of the class, there was a steady influx of seven to eight students each year with a corresponding number leaving the school system. Even during the junior and senior years of high school 13 and eight students respectively, failed to complete the school year. This can be accounted for largely by the normal rotation of personnel at the nearby military installations.

The pattern differs slightly for Spanish-American members of the class. While fewer Spanish-American students enter the class each year, there is a net loss of this ethnic group every year but 1963-1964. During the last two years of high school this exodus increases appreciably with a net loss of nine and 12 students from the eleventh and twelfth grades, respectively.

The Indian members of this class follow still another pattern. While there are no entering Indian students after the ninth grade, there is steady attrition among this ethnic group each year. As a result while the proportion of Anglo and Spanish-Americans in the class increases slightly between 1960 and 1966, the proportion of Indian children steadily shrinks by a corresponding amount. Moreover, only seven of the 11 Apache children who completed the twelfth grade graduated in June of 1966. It might be added that is is estimated that there had already been a 50 percent attrition rate among these Indian children by the time the reached junior high school.

POST HIGH SCHOOL PLANS

An analysis of the post high school plans of the class of 1966 is most revealing. Fully 68 percent of the Anglo seniors planned to attend college in the fall. Only three of these students who did not plan to attend college were unemployed during the summer of 1966 when this study was undertaken.

Among the Spanish-American members of the class only slightly more than one-third of the students planned to attend college. About the same proportion were unemployed or quite undecided about their future plans at this same point in time.

Only three of the Indian students indicated that they planned to attend college in the fall. Two others planned to attend a school offering vocational

training. At the same time four of these students were undecided about their plans or were unemployed during the summer of 1966.

Figure 8

EDUCATIONAL OPPORTUNITY FOR
SPANISH-AMERICAN AND INDIAN
CHILDREN

The introduction to this paper stated that an exploratory assessment would be made of the educational opportunity offered by two school systems serving multi-cultural communities. Selected pupil performance data were evaluated in order to assess the extent to which equal educational opportunity exists for Spanish-American and Indian children.

It certainly comes as no surprise that large numbers of Spanish-American and Indian children in both school districts score below the 60th percentile on ability tests when compared to national norm groups; while at the same time their Anglo classmates on the whole attain higher scores than predicted.

However, in both school systems Spanish-American and Indian students at all three ability levels score much lower on achievement tests than do their Anglo classmates with comparable IQ scores. This is rather strikingly true for Navajo and Apache Indian children in particular. By far the poorest performance of any group occurs among the Apache students in system B. Out of 82 Indian children only six achieve at the 40th percentile or above on standardized achievement tests despite the fact that 22 of these students had IQ scores above this level when compared to the national norm group. If these achievement tests do indeed accurately measure the outcomes of the instructional programs it is quite evident that the programs offered by the two school systems studied appear to be particularly ill suited for Spanish-American and Indian students. One would conclude that even, those minority

children who begin school with a comparable level of ability fail to gain as much from their schooling as their Anglo peers.

A large number of students apparently experience difficulties in the junior high schools in both school districts. This is apparent from Figure 5. A rather large proportion of students at all three ability levels score below the 40th percentile on achievement tests. Even among the high ability junior high school students 25 percent and 42 percent of the students in systems A and B, respectively, perform poorly on achievement tests.

The data in figure 6 help to support this contention. While attendance among Apache children who attend school in community B becomes progressively worse the longer they attend school, by far the poorest attendance recorded is exhibited by Apache junior high school students. Over half of the Apache Indian children included in our junior high school sample were absent from school 20 or more days during the 1965-1966 school year.

Turnover patterns also differed for the three ethnic groups. In System B on the average about seven Anglo students transferred into the class of 1966 each year at the secondary level, while a like number transferred out. Among the Spanish-American members of the class a net loss occurred every year but one. By far the largest number of these students left during the last two years of high school. Steady attrition occurred among the Indian children all during secondary school. The proportion of Indian students in the class of 1966 dwindled steadily until only seven remained out of a graduating class of 77 students.

The post high school plans of the three ethnic groups also vary greatly. While 68 percent of the Anglo seniors planned to attend college in the fall of 1966 only 36 percent of their Spanish-American classmates, and 27 percent

of their Indian classmates entertained similar plans. At the same time, the percentage of students who were undecided about their future plans or unemployed when this survey was undertaken during the summer of 1966 ranged from 10 percent to 29 percent to 36 percent among Anglo, Spanish-American, and Indian seniors, respectively.

Again when we compare attendance, drop-out rates, and post high school plans for the three ethnic groups, the dissimilar results of exposure to the school programs offered by the two communities is quite evident. Based on this analysis one is forced to conclude that gross inequality of educational opportunity exists in these two school districts despite the fact that children from all three ethnic groups attend the same schools and by and large are exposed to the same educational programs.

If equality of educational opportunity is to be achieved in school systems such as the ones investigated here, much more needs to be done over and above simply providing facilities and essentially common programs for students. There is evidence from this study of not only a deficit in achievement among Spanish-American and Indian children but more importantly a cumulative loss of faith in the school and its programs, if attendance, drop-out rates and post high school plans are any indication. The schools need to recognize this problem and to take it into account in their attempts to educate children from minority ethnic groups.

Moreover one of the major findings of the equality of Educational Opportunity study is most relevant to these problems. Coleman and others (1966) state:

> The schools do differ, however, in their relation to the various racial and ethnic groups. The average white student's achievement seems to be less affected by the strength or weakness of his school's facilities, curriculums, and teachers than is the

> average minority pupil's. To put it another way, the achievement of minority pupils depends more on the schools they attend than does the achievement of majority pupils. Thus, 20 percent of the achievement of Negroes in the South is associated with the particular schools they go to, whereas only 10 percent of the achievement of whites in the South is. Except for Oriental Americans, this general result is found for all minorities.
>
> The inference might then be made that improving the school of a minority pupil may increase his achievement more than would improving the school of a white child increase his. Similarly, the average minority pupil's achievement may suffer more in a school of low quality than might the average white pupil's. In short, whites and to a lesser extent Oriental Americans, are less affected one way or the other by the quality of their schools than are minority pupils. This indicates that it is for the most disadvantaged children that improvements in school quality will make the most difference in achievement.

The data from our study strongly support this conclusion. It is evident from Figure 5 that in general students regardless of ethnic background achieve at a progressibely lower level as they move through these two school systems. Students with medium and high IQ scores in particular perform at lower levels on achievement tests than would be expected from their scores on ability tests. In comparison to Anglo students this cumulative deficit in achievement is more pronounced for Spanish-American students and most pronounced for Indian children (see Figure 4). The few longitudinal studies of achievement reflect this same pattern, namely that achievement in grade levels for disadvantaged students in general falls increasingly farther below the normative group (Osborne, 1960; Stodolsky and Lesser, 1967). Exactly the same conclusion can be drawn in contrasting attendance (Figure 6), turnover (Figure 7), and post high school plans (Figure 8) among the three ethnic groups, namely that the performance of the Spanish-American and Indian students are affected the most by inadequate educational programs offered by these two school districts. For it is among these students who lack the verbal and cognitive skills that their Anglo classmates acquire through home experience

that school programs have the greatest effect. The findings of this study as well as others (e.g. Jensen, 1961) suggests that environmental depravation interacts with the school's programs making such programs more salient for minority ethnic groups.

NOTES

[1]The data for this study were collected as part of An Interdisciplinary Institute for the In-Service Training of Teachers and Other School Personnel to Accelerate the School Acceptance of Indian, Negro, and Spanish-speaking Pupils from the Southwest, Contract No. OEC 4-6-000201-1980, from the Office of Education, Department of Health, Education and Welfare, under P.L. 88-352, Title IV, Section 404, The Civil Rights Act of 1964, July, 1966. This paper was initially prepared for the United States Senate Committee on Labor and Public Welfare, Special Subcommittee on Indian Education.

REFERENCES

Anastasi, Anne. Differential Psychology. New York: Macmillan, 1958.

Anderson, James G. and Safar, Dwight. "The Influence of Differential Community Perceptions on the Provision of Equal Educational Opportunities," Sociology of Education 40:219-230; summer, 1967.

Ashmore, Harry S., The Negroes and the Schools. Chapel Hill, North Carolina: University of North Carolina Press, 1954.

Coleman, James S., "The Concept of Equality of Educational Opportunity," Harvard Educational Review 38:7-22; winter, 1968.

Coleman, James S., et al. Equality of Educational Opportunity. Washington, D.C.: Government Printing Office, 1966.

Dennis, W., "The Performance of Hopi Children on the Goodenough Draw-A-Man Test," Journal of Corporative Psychology," 34:341-348; 1942.

Deutsch, M., et al., "Guidelines for Testing Minority Group Children" Journal of Social Issues 20:129-145; 1964.

Dyer, Henry S., "School Factors and Equal Educational Opportunity," Harvard Educational Review 38:38-56; winter, 1968.

Garth, T.R., et al., "Administration of Non-language Intelligence Tests to Mexicans," Journal of Obnormal and Social Psychology 31:147-159; 1936.

Havighurst, R.J., et al., "Environment and the Draw-a-Man Test: The Performance of Indian Children," Journal of Abnormal and Social Psychology 41:50-63; 1946.

Hunt, J. McV. Intelligence and Experience. New York: Ronald Press, 1961.

Jensen, A.R., "Learning Abilities in Mexican-American and Anglo-American Children," California Journal of Educational Research 12:147-159; 1961.

Osborne, R.T., "Racial Differences in Mental Growth and School Achievement: A Longitudinal Study," Psychological Report 7:233-239; 1960.

Payne, Arlene., "Early Prediction of Achievement," Administrator's Notebook 13: 1-4; 1964.

Russell, T.W., "The Spontaneous and Instructed Drawings of Zuni; Children," Journal of Comparative Psychology 35:11-15; 1943.

Stodolsky, Susan S. and Lesser, Gerald S., "Learning Patterns in the Disadvantaged," 37:546-593; Fall, 1967.

Tyler, Leona. The Psychology of Human Differences. New York: Appleton-Century-Crofts, 1955.

Figure 1

SCORING OF PUPIL PERFORMANCE DATA

VARIABLES	SCORE LOW	MEDIUM	HIGH
Ability--Score on most recent mental ability test(national reference group).	0--39th Percentile -2.75 -- -0.24 standard score	40--59th Percentile -0.25 -- +0.24 standard score	60--100th Percentile +0.25 -- +2.75 standard score
Achievement--Composite score on most recent achievement test battery (national reference group).	0--39th Percentile	40--59th Percentile	60--100th Percentile
Attendance--Total number of days absent during last school year.	20 or more	11-19	0-10

FIGURE 2 --- PUPIL ABILITY LEVELS FOR ANGLO, SPANISH-AMERICAN AND INDIAN PUPILS

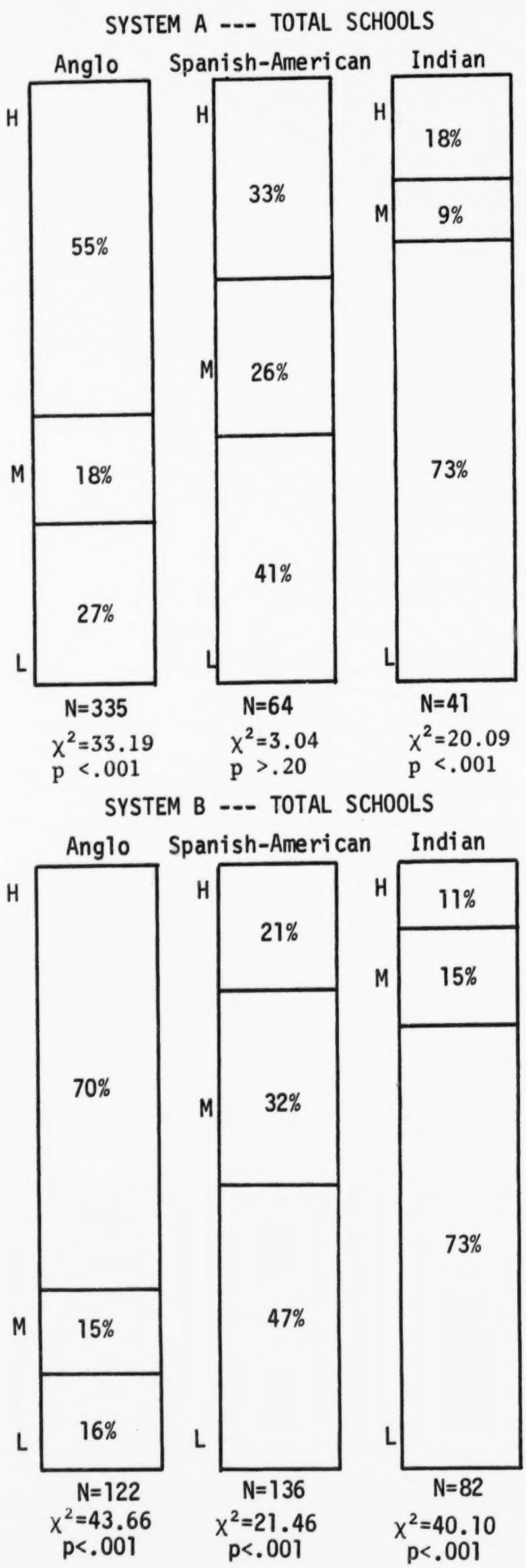
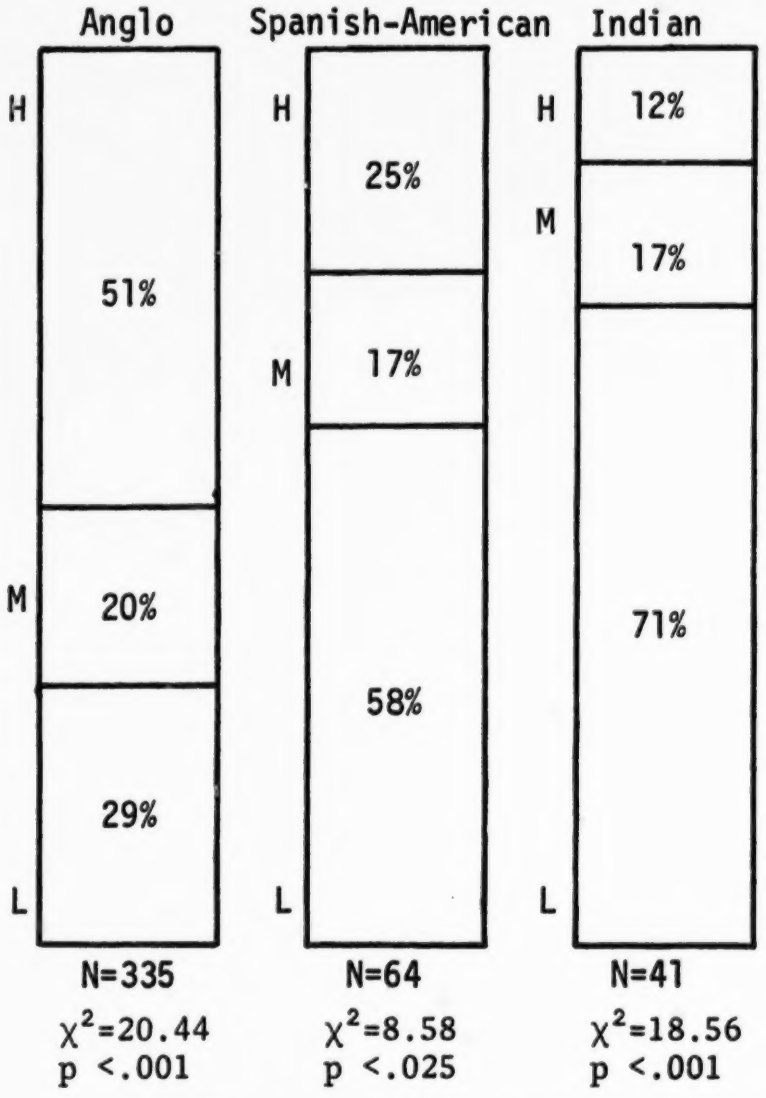
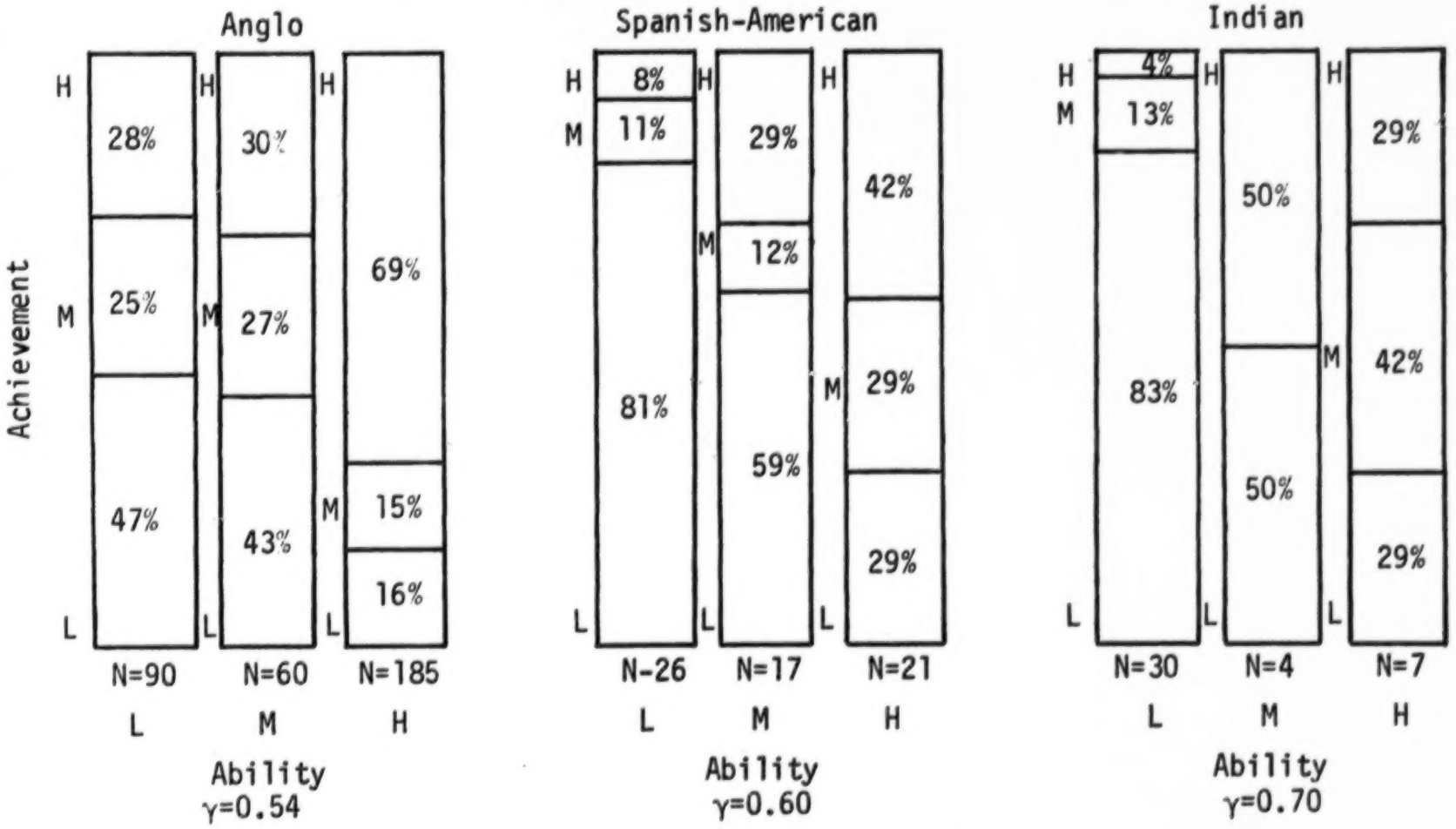


FIGURE 3 --- PUPIL ACHIEVEMENT LEVELS FOR ANGLO, SPANISH-AMERICAN AND INDIAN PUPILS



SYSTEM A --- TOTAL SCHOOLS



SYSTEM B --- TOTAL SCHOOLS

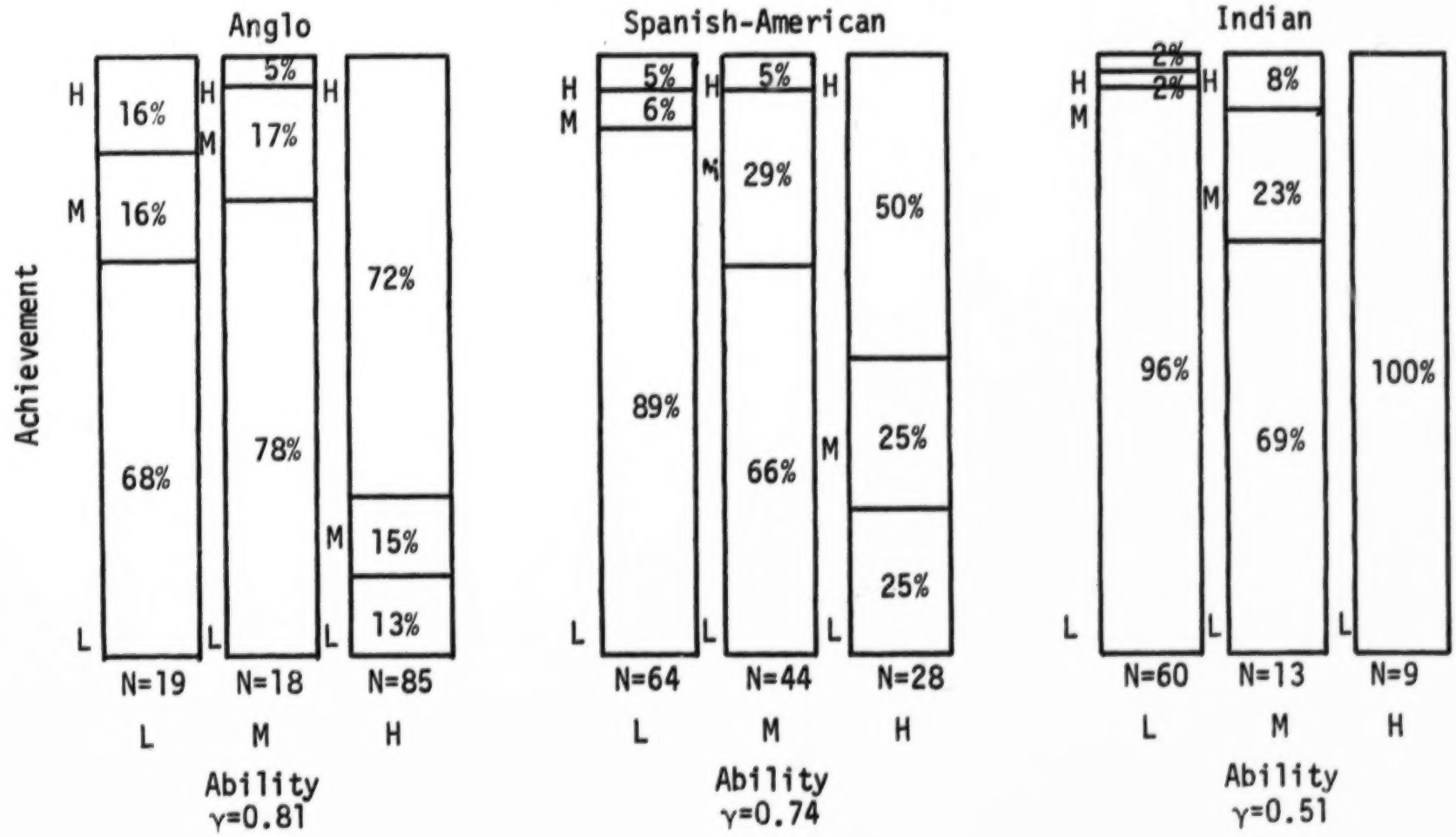
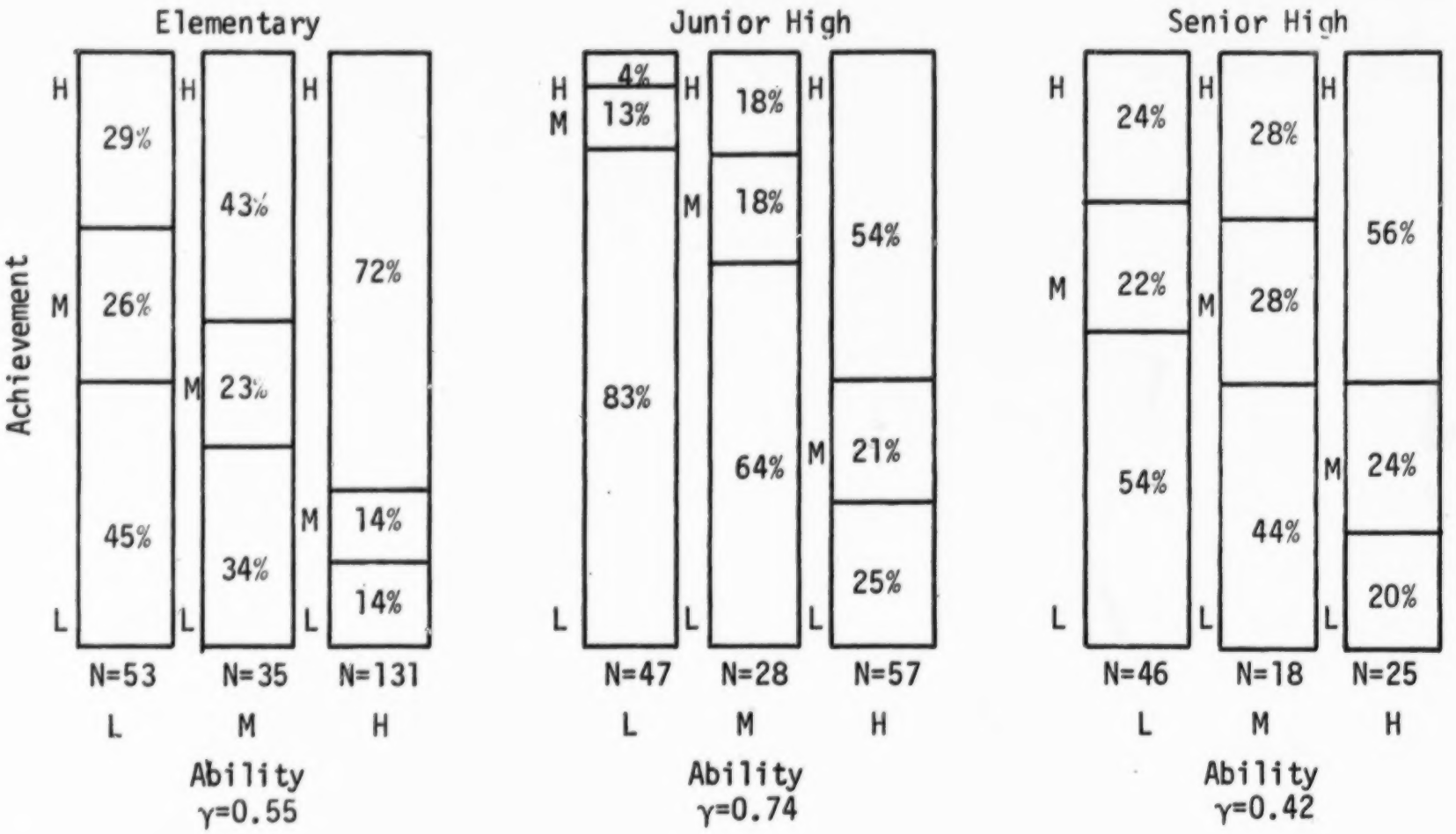


FIGURE 4 --- RELATIONSHIP BETWEEN ABILITY AND ACHIEVEMENT FOR ANGLO, SPANISH-AMERICAN AND INDIAN PUPILS

SYSTEM A



SYSTEM B

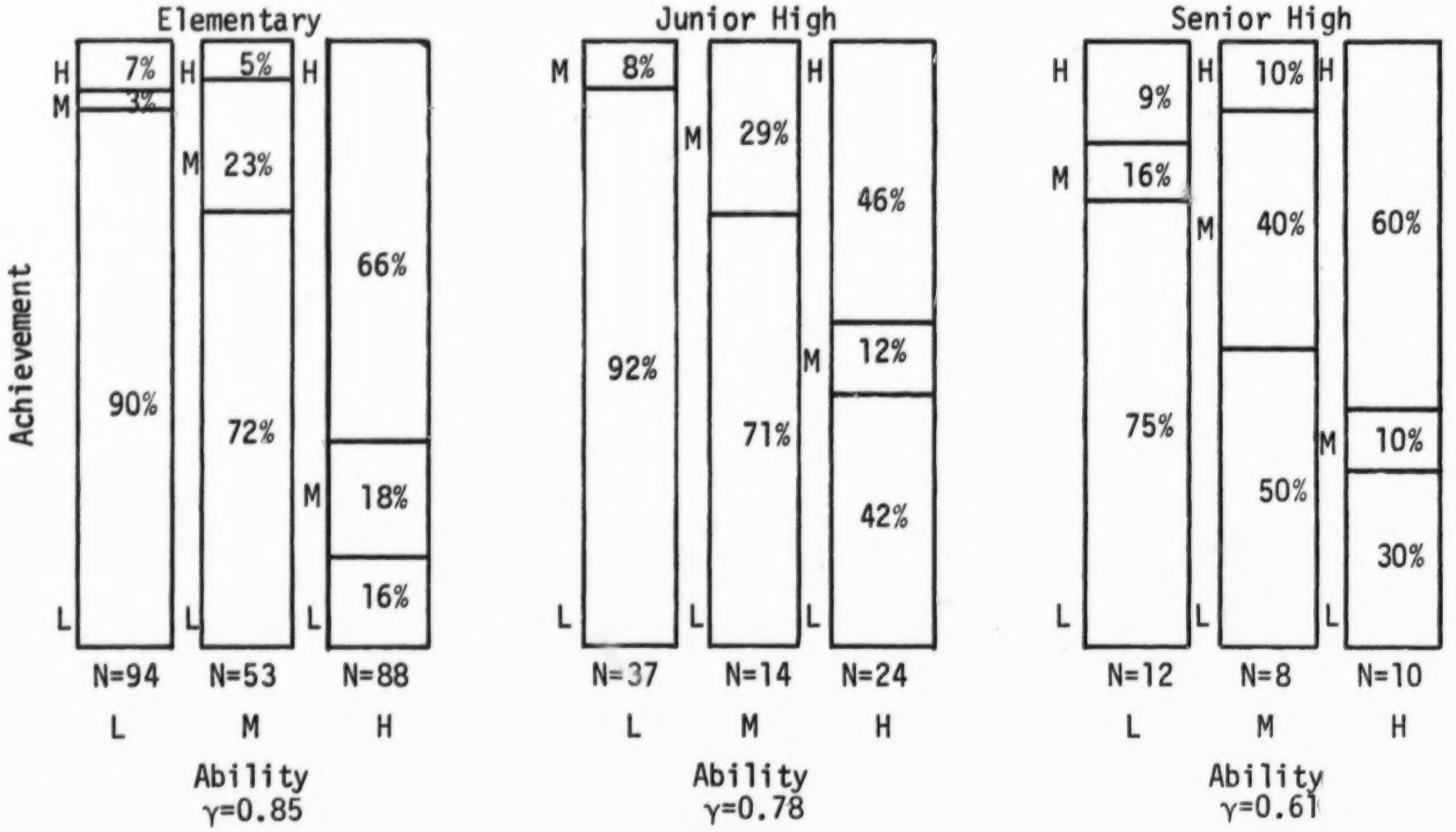
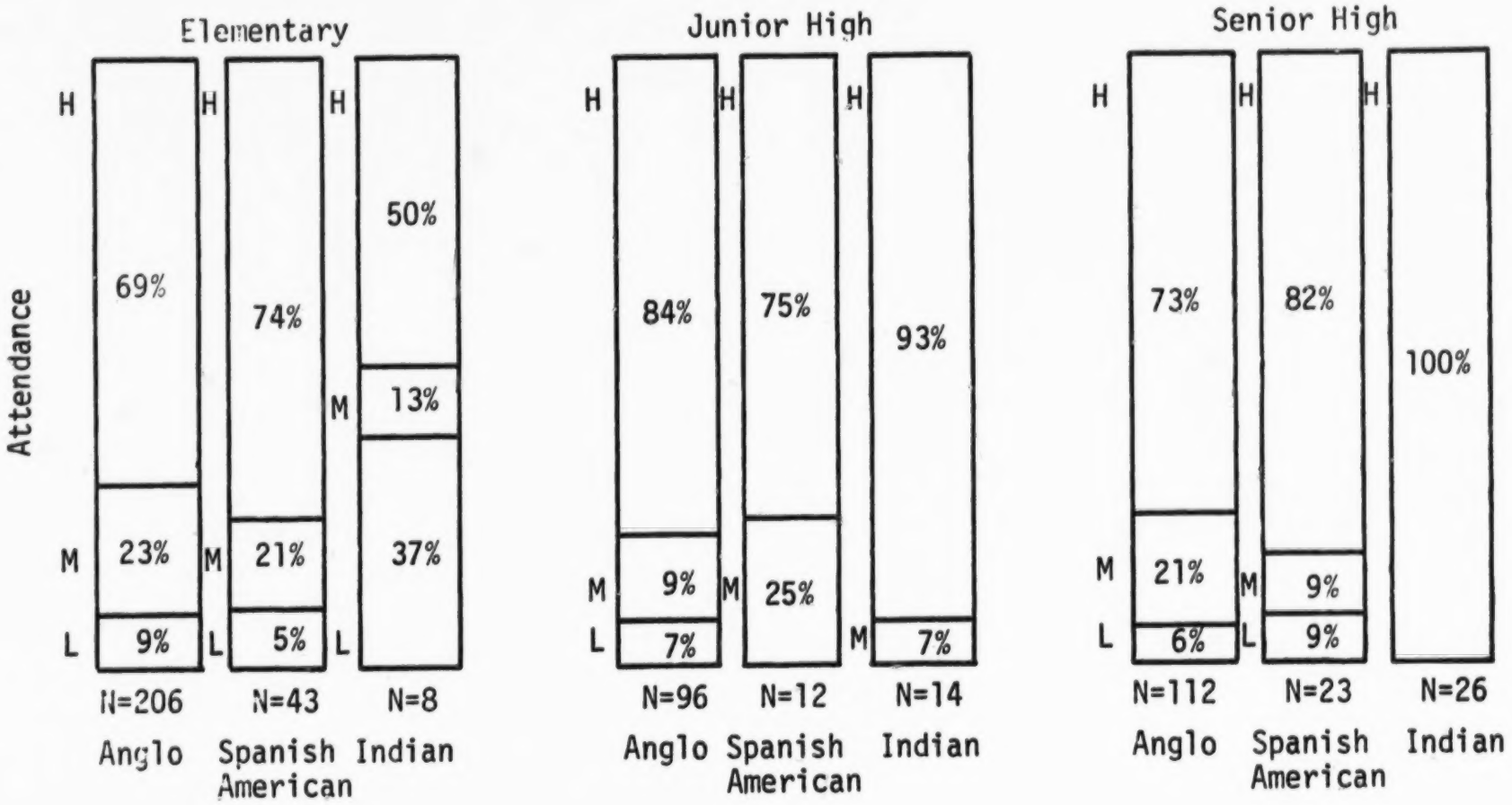


FIGURE 5 --- RELATIONSHIP BETWEEN ABILITY AND ACHIEVEMENT FOR ELEMENTARY JUNIOR HIGH AND SENIOR HIGH SCHOOLS

SYSTEM A



SYSTEM B

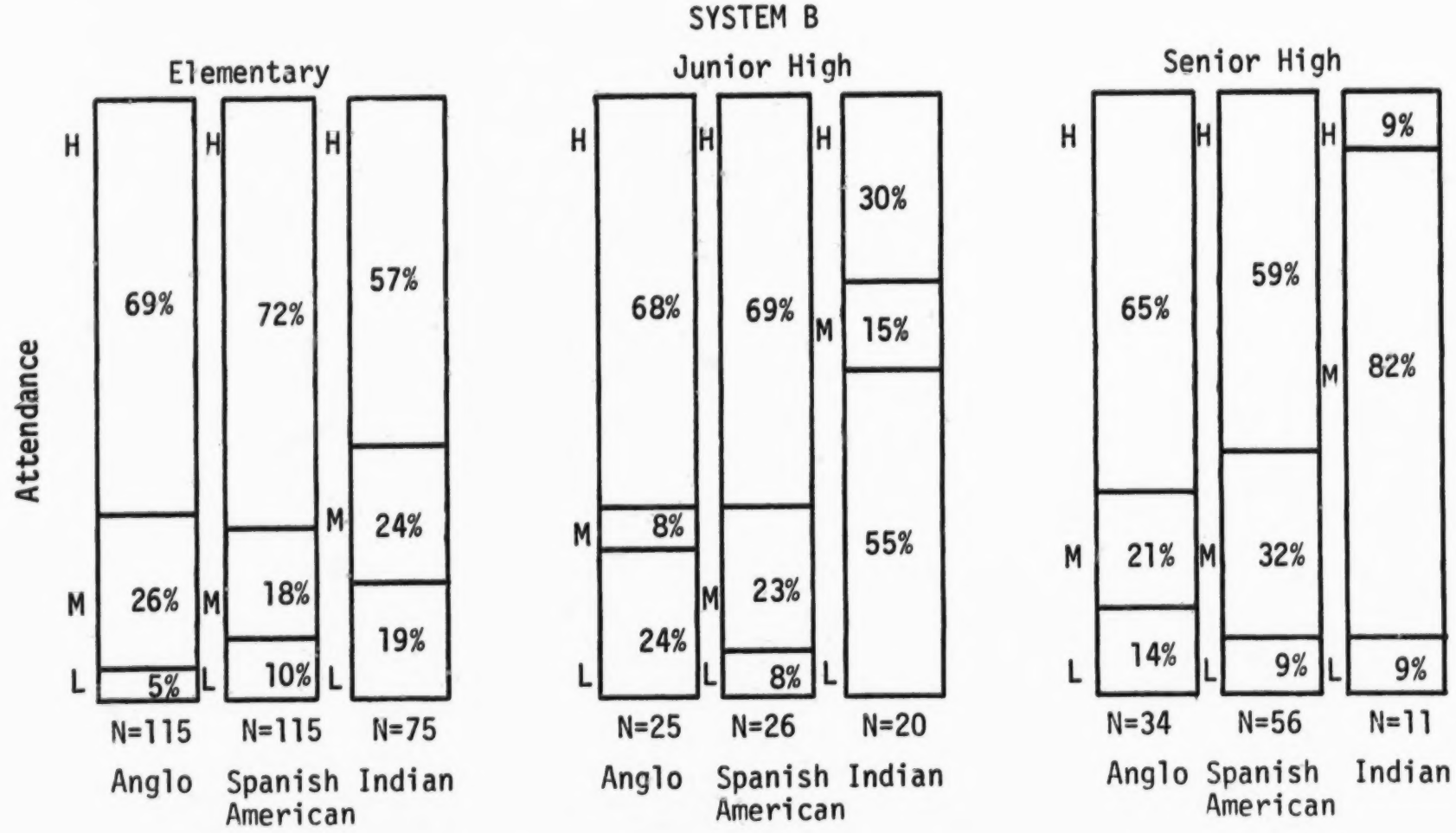


FIGURE 6 --- ATTENDANCE FOR ANGLO, SPANISH-AMERICAN AND INDIAN PUPILS IN THE ELEMENTARY, JUNIOR HIGH AND SENIOR HIGH SCHOOLS

Figure 7
System B

TURNOVER IN THE CLASS OF 1966

7th grade 1960-1961		8th grade 1961-1962		9th grade 1962-1963		10th grade 1963-1964		11th grade 1964-1965		12th grade 1965-1966		Graduated
		A--7 S--4 I--4 In		A--8 S--1 I--1 In		A--7 S--3 I--0 In		A--7 S--2 I--0 In		A--0 S--1 I--0 In		
Anglo	41	Anglo	42	Anglo	44	Anglo	42	Anglo	36	Anglo	28	Anglo 26
Spanish-American	73	Spanish-American	71	Spanish-American	66	Spanish-American	66	Spanish-American	57	Spanish-American	45	Spanish-American 43
Indian	25	Indian	28	Indian	24	Indian	21	Indian	17	Indian	11	Indian 7
		A--6 S--6 I--1 Out		A--6 S--6 I--5 Out		A--9 S--3 I--3 Out		A--13 S--11 I--4 Out		A--8 S--13 I--6 Out		Out

Figure 8
System B

POST HIGH SCHOOL PLANS
CLASS OF 1966

Post High School Plans	Anglo		Spanish-American		Indian	
	N	%	N	%	N	%
College	19	68	16	36	3	27
Vocational Training	0	0	0	0	2	18
Military Service	1	4	6	13	2	18
Married	1	4	2	4	0	0
Employed	4	14	8	18	0	0
Unemployed	3	10	7	16	1	9
Undecided	0	0	6	13	3	27
Total	28	100	35	100	11	100